Section III

Resource Management Systems and Guidance Documents

PLANNING RESOURCE MANAGEMENT SYSTEMS

A Resource Management System (RMS) is a combination of practices that will solve the identified resource problems to at least the level indicated in the quality criteria and meet the cooperator's objectives. As a minimum, the RMS consists of:

1. *effective practices* that are needed to prevent resource degradation and ensure sustainable use, and
2. *facilitating practices* that are needed to ensure that the effective practices function as planned.

For a discussion of effective practices, see the FOTG Section III "Quality Criteria" subsection.

Successful resource management systems are dependent on the correct application of the practices that make up a RMS. Conservation practice standards (FOTG Section IV) establish the minimum acceptable quality for planning, designing, constructing, operating, and maintaining conservation practices.

Successful resource management systems consist of practices that are also compatible with the customer's objectives and characteristics. An RMS that results in resource sustainability but is too costly, too hard to manage, or does not fit with the customer's enterprise will not be implemented. Therefore, it is essential that human considerations be taken into account (refer to the FOTG Section III "Human Considerations" subsection).

An RMS is the minimum level of treatment needed to attain sustainable use of the natural resources. Many times, customers desire to improve their resources beyond sustainable levels. The conservation practices and management used to maintain and improve the resource should be included in the customer's conservation plan.

GUIDANCE DOCUMENTS

Guidance Documents identify RMS's that are adequate for a particular resource setting. For example, Guidance Document C8 lists two RMS's that are adequate for treating any cropland that is not adjacent to surface water, has no manure applied, and is not irrigated. The listed RMS's consist of a system of practices that, when applied according to the practice standard (FOTG Section IV), will treat all resources to a sustainable level.

The Guidance Documents that follow are sorted by land use. As a minimum to achieve an RMS, the resource concerns listed in the "Typical Resource Concerns" column **must** be treated to quality criteria levels unless the planner can document that the resource concern does not exist. (see discussion on "Using Guidance Documents" that follows). FOTG Section III Quality Criteria identifies appropriate assessment tools for each resource concern.

The effects that each RMS alternative can be expected to have on the resources is evaluated in FOTG Section V "Effects for Guidance Documents."

USING GUIDANCE DOCUMENTS

Use of Guidance Documents is not required. A Certified Conservation Planner may develop RMS alternatives based on field inventory and analysis. Documentation identifying the resource concerns and their extent must be kept in the casefile. The exhibits section of the NPPH contain checklists that can be used for this purpose. Effects of the RMS (including evaluation of meeting Quality Criteria) must also be documented. The "Conservation Effects" form in FOTG Section V "Effects for Guidance Documents" or a similar format should be used.

Because conservation effects have already been evaluated, Guidance Documents provide streamlined documentation of the RMS alternatives presented to and/or selected by a customer. This may be particularly helpful in preparing and documenting the RMS alternative that accompanies a Progressive Plan.

There are several options for using Guidance Documents:

1. **Use the Guidance Document without modification**. The conservation effects of each RMS in the Guidance Documents have already been evaluated to ensure that Quality Criteria are met for all potential resource concerns. So, any individual (planner, third party vendor, customer, etc.) may select a system from the listed RMS alternatives. As long as the practices are implemented according to the practice standard (FOTG Section IV), quality criteria will be met.

   Documentation: Record the RMS selected in the Conservation Assistance Notes (for example, Guidance Document ID# C1, RMS Alt #2). There is no need for further documentation of resource inventories or conservation effects.

2. **Develop another RMS alternative from the "Practices that can effectively treat the resource concern" column of the Guidance Document.** A Certified Conservation Planner may develop another RMS alternative by choosing practices from the "Practices that can effectively treat the resource concern" column. The Certified Conservation Planner who uses this approach must ensure that the RMS is complete by all treating all resource concerns, selecting practices that are practical and compatible with each other, and including any needed facilitating practices.

   Documentation: Make a copy of the applicable Guidance Document and record the new alternative under RMS Alternative #3. Evaluate the conservation effects of the new RMS by using the "Conservation Effects" form in FOTG Section V "Effects for Guidance Documents" or a similar format. File the copy of the Guidance Document and the conservation effects form for the new alternative in the casefile. See following pages for documentation examples.

   There is no need for further documentation of resource inventories or conservation effects in the casefile.

3. **Modify the Guidance Document to eliminate particular resource concerns.** A Certified Conservation Planner may determine that a resource concern does not exist on a particular Conservation Management Unit. Practices in the selected RMS alternative that treat the eliminated resource concern may be deleted from the RMS alternative as long as the other resource concerns are treated to Quality Criteria levels.

   Documentation: File a copy of the Guidance Document and corresponding "Conservation Effects" from FOTG Section V in the casefile. Cross out eliminated practices and resource concerns. Include supporting resource assessments for the eliminated resource concerns (e.g., soil loss calculations, soil-pesticide interaction ratings, Wildlife Habitat Inventory Worksheet, etc.) in the customer casefile. No further documentation of resource inventories is required.

DEVELOPING LOCALIZED GUIDANCE DOCUMENTS

Localized Guidance Documents can be developed to further streamline conservation planning and documentation. Field Offices may propose additional Guidance Documents, through appropriate channels, for permanent inclusion in the local FOTG.

The proposed Guidance Documents may modify the existing Guidance Documents by developing RMS alternatives better suited to the local area. By making RMS alternatives developed under method #2 under "Using Guidance Documents" a permanent part of the FOTG, the planner reduces the required documentation to an assistance note entry.

Proposed Guidance documents may also be based on local resource settings. Guidance Documents based on resource settings that identify common soil map units may be particularly helpful in eliminating specific resource concerns.

For example in St. Joseph County, due to their inherent characteristics, 18 of the 28 soils mapped in the county do not have wind erosion as a resource concern. New Guidance Documents, without wind erosion as a resource concern, could be developed by adding the following to the "Resource Setting:"
"Soils have either:
1. An I factor less than or equal to 56, or
2. An I factor less than or equal to 86, a tolerable soil loss of 5, and a North-South field length of 1800 feet or less."

Alternatively, the specific soil map units could be identified in the "Resource Setting" as follows:

"Includes map units 14, 18, 21A, 27B, 27C, and 29B. Also includes map units 4B, 4C, 4D, 10B, 10C, 10D, 12A, 15, 16B, 17B, 28B, and 28C where the North-South field length is 1800 feet or less."

EXAMPLE DOCUMENTATION – ALTERNATIVE BASED ON GUIDANCE DOCUMENT

Land use: Cropland **Guidance Document ID#:** C1
page 1 of 3

Resource Setting: Cropland adjacent to surface water. Manure applied. Irrigated.

RMS Alternative #1
Conservation Crop Rotation (328)
Filter Strip (393)
Grassed Waterway (412)
Grade Stabilization Structure (410)
Irrigation Water Management (449)
Nutrient Management (590)
Pest Management (595)
Residue Management
(one or more of the following):
Mulch Till (329B)
No-till and Strip Till (329A)
Riparian Forest Buffer (391)
Streambank and Shoreline Protection (580)

RMS Alternative #2
Conservation Crop Rotation (328)
Critical Area Planting (342)
Filter Strip (393)
Irrigation Water Management (449)
Lined Waterway or Outlet (468)
Nutrient Management (590)
Pest Management (595)
Riparian Forest Buffer (391)
Streambank and Shoreline Protection (580)
Windbreak/Shelterbelt Establishment (380)

RMS Alternative #3
Cons. Crop Rotation
WASCOBs
Underground Outlet
Irr. Water Mgt.
Nutr. Mgt
Pest Mgt.
Res. Mgt, No-till
Filter Strip
Riparian Forest Buffer
Strmbnk & Shore Prot.

Typical Resource Concerns	Practices that can effectively treat the resource concern*
SOIL Erosion	
1) Sheet & rill erosion	Alley Cropping (311) Conservation Cover (327) Conservation Crop Rotation (328) Contour Farming (330) Cover Crop (340) Critical Area Planting (342) Irrigation Water Management (449) Mulching (484) Pasture and Hayland Planting (512) Residue Management, Mulch Till (329B) Residue Management, No-till and Strip Till (329A) Residue Management, Ridge Till (329C) Residue Management, Seasonal (344) Terrace (600)
2) Wind erosion	Alley Cropping (311) Conservation Cover (327) Conservation Crop Rotation (328) Cover Crop (340) Critical Area Planting (342) Cross Wind Trap Strip – Field (589C) Drainage Water Management (554)

* Practices must be installed according to NRCS practice standards found in FOTG Section IV. General criteria (or design criteria), Additional Criteria specific to the resource concern, and Operation and Maintenance requirements must be met.

EXAMPLE DOCUMENTATION – ALTERNATIVE BASED ON GUIDANCE DOCUMENT

Conservation Effects

Land use: Cropland **Guidance Document ID#:** C1

Resource Setting: Cropland adjacent to surface water. Manure applied. Irrigated.

RMS Alternative ~~#1~~ 3
Conservation Crop Rotation (328)
Filter Strip (393)
~~Grassed Waterway (412)~~
~~Grade Stabilization Structure (410)~~ WASCOBs /Underground Outlet
Irrigation Water Management (449)
Nutrient Management (590)
Pest Management (595)
Residue Management
~~(one or more of the following):~~
~~Mulch Till (329B)~~
No-till and Strip Till (329A)
Riparian Forest Buffer (391)
Streambank and Shoreline Protection (580)

Typical Resource Concerns	Practice(s) that treat the resource concern to Quality Criteria levels*	Comments
SOIL Erosion		
1) Sheet & rill erosion	Conservation Crop Rotation (328) Irrigation Water Management (449) ~~Residue Management, Mulch Till (329B)~~ Residue Management, No-till and Strip Till (329A)	soil loss less than "T"
2) Wind erosion	Conservation Crop Rotation (328) ~~Residue Management, Mulch Till (329B)~~ Residue Management, No-till and Strip Till (329A)	soil loss less than "T"
3) Ephemeral gully/concentrated flow erosion	~~Grassed Waterway (412)~~ WASCOBs /Underground Outlet	gullies stabilized
4) Classic gully/concentrated flow erosion	~~Grade Stabilization Structure (410)~~ WASCOBs /Underground Outlet	gullies stabilized
5) Other erosion	Streambank and Shoreline Protection (580)	areas stabilized
WATER Quality – ground water		
1) Pesticides	Conservation Crop Rotation (328) Irrigation Water Management (449) Pest Management (595)	pesticide movement minimized
2) Nutrients	Irrigation Water Management (449) Nutrient Management (590)	nutrient movement minimized

* Practices must be installed according to NRCS practice standards found in FOTG Section IV. General criteria (or design criteria), Additional Criteria specific to the resource concern, and Operation and Maintenance requirements must be met.

Land use: Cropland **Guidance Document ID#:** C1

Typical Resource Concerns	Practice(s) that treat the resource concern to Quality Criteria levels*	Comments
WATER Quality – surface water		
1) Pesticides	Conservation Crop Rotation (328) Filter Strip (393) Irrigation Water Management (449) Pest Management (595) ~~Residue Management, Mulch Till (329B)~~ Residue Management, No-Till & Strip Till (329A) Riparian Forest Buffer (391)	Pesticide movement minimized.
2) Livestock operations	Filter Strip (393) Irrigation Water Management (449) Nutrient Management (590) ~~Residue Management, Mulch Till (329B)~~ Residue Management, No-Till & Strip Till (329A) Riparian Forest Buffer (391)	Manure and nutrient movement minimized.
3) Nutrients/ sediments	Filter Strip (393) ~~Grade Stabilization Structure (410)~~ ~~Grassed Waterway (412)~~ WASCOBs /Underground Outlet Irrigation Water Management (449) Nutrient Management (590) ~~Residue Management, Mulch Till (329B)~~ Residue Management, No-Till & Strip Till (329A) Riparian Forest Buffer (391)	Nutrient and sediment movement minimized.
WATER Quantity		
1) Irrigation Water Source	Irrigation Water Management (449)	Application rate is not excessive.
AIR		
1) Airborne Chemical Drift	Pest Management (595)	Application on target and in compliance with laws.
2) Airborne Odors		No complaints.
PLANTS		
1) Pests (including invasive species)	Pest Management (595)	Invasive species controlled.
ANIMAL Habitat		
1) Wildlife Habitat secondary purpose	Conservation Crop Rotation (328) Any crop rotation provides Habitat Index greater than 0.35 when combined with No till and Pest Mgt.	~~Crop rotation must consist of row crops-small grains-grass/legumes and provide >10% unharvested areas unless other practices and/or field conditions provide a Crop Habitat Index of 0.35 (e.g., small field size, short distance to cover, high crop residue amounts)~~
2) Warmwater and coldwater fisheries	Riparian Forest Buffer (391)	35 feet of permanent vegetation along watercourses

* Practices must be installed according to NRCS practice standards found in FOTG Section IV. General criteria (or design criteria), Additional Criteria specific to the resource concern, and Operation and Maintenance requirements must be met.

Land use: Cropland **Guidance Document ID#:** C1
page 3 of 3

Typical Resource Concerns	**Practice(s) that treat the resource concern to Quality Criteria levels***	**Comments**
ANIMAL Management		
1) Threatened and endangered species	Pest Management (595)	Laws regarding T&E species followed.

* Practices must be installed according to NRCS practice standards found in FOTG Section IV. General criteria (or design criteria), Additional Criteria specific to the resource concern, and Operation and Maintenance requirements must be met.

TECHNICAL GUIDE
SECTION III
State-Wide
Resource Management Systems and Guidance Documents - Contents

Guidance Documents	Surface water	Manure	Irrigated
Cropland			
C1. Field crops, adjacent to water, manure applied, irrigated	x	x	x
C2. Field crops, adjacent to water, manure applied, not irrigated	x	x	
C3. Field crops, adjacent to water, no manure applied, irrigated	x		x
C4. Field crops, adjacent to water, no manure applied, not irrigated	x		
C5. Field crops, not adjacent to water, manure applied, irrigated		x	x
C6. Field crops, not adjacent to water, manure applied, not irrigated		x	
C7. Field crops, not adjacent to water, no manure applied, irrigated			x
C8. Field crops, not adjacent to water, no manure applied, not irrigated			
C9. Orchard, vineyard, or ornamental nursery, adjacent to water, irrigated	x		x
C10. Orchard, vineyard, or ornamental nursery, adjacent to water, not irrigated	x		
C11. Orchard, vineyard, or ornamental nursery, not adjacent to water, irrigated			x
C12. Orchard, vineyard, or ornamental nursery, not adjacent to water, not irrigated			
Forest			
F1. Forest, adjacent to water	x		
F2. Forest, not adjacent to water			
Hay			
H1. Hay, adjacent to water, manure applied	x	x	
H2. Hay, adjacent to water, no manure applied	x		
H3. Hay, not adjacent to water, manure applied		x	
H4. Hay, not adjacent to water, no manure applied			
Headquarters			
HQ1. Headquarters, adjacent to water, with livestock	x	x	
HQ2. Headquarters, adjacent to water, no livestock	x		
HQ3. Headquarters, not adjacent to water, with livestock		x	
HQ4. Headquarters, not adjacent to water, no livestock			
Pasture			
P1. Pasture, adjacent to water	x		
P2. Pasture, not adjacent to water			